

REMARKS

Applicants have carefully reviewed this Application in light of the Final Office Action mailed June 13, 2008. Claims 1-8, 10-12, 33, and 34 are pending in this Application. Claims 13-32 were previously cancelled without prejudice or disclaimer due to an election/restriction requirement. Additionally, Claim 9 was previously cancelled without prejudice or disclaimer. Claims 1-8, 10-12, 33, and 34 stand rejected under 35 U.S.C. § 103(a). Claims 1 and 8 have been amended to further define features of Applicants' invention. Applicants respectfully request reconsideration and favorable action in this case.

Rejections under 35 U.S.C. § 103

Claims 1-8, 10-12, 33, and 34 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent 6,608,717 issued to June I. Medford et al. ("*Medford*").

Medford discloses an optical coherence microscope for application in the field of developmental biology. (Col. 5, lines 8-15). The microscope is designed to image cells below the surface of living tissue in situations where light scattering in the specimen would render it opaque to a conventional or confocal light microscope. (Col. 6, lines 58-61).

Claim 1, as amended, recites a direct-to-digital holography system comprising "a reference mirror located at a waist of the reference beam and optically coupled to the illumination lens via the beam splitter such that the reference beam is reflected from the reference mirror to the beam splitter in order to eliminate the need for a reference objective on a reference arm."

Claim 8, as amended, recites a method for acquiring a complex image in a direct-to-digital holography system comprising the step of "reflecting the portion of the reference beam from a reference mirror located at the waist of the reference beam and optically coupled to the illumination lens via the beam splitter such that the reference beam is reflected from the reference mirror to the beam splitter, the reference mirror eliminating the need for a reference objective on a reference arm."

Applicants respectfully submit that the cited reference fails to disclose every element of Applicants' invention as amended. *Medford* fails to teach at least a direct-to-digital holography system comprising "a reference mirror located at a waist of the reference beam

and optically coupled to the illumination lens *via the beam splitter* such that the reference beam is reflected from the reference mirror to the beam splitter in order to eliminate the need for a reference objective on a reference arm,” as recited by amended Claim 1. Additionally, *Medford* fails to teach a method for acquiring a complex image in a direct-to-digital holography system including the step of “reflecting the portion of the reference beam from a reference mirror located at the waist of the reference beam and optically coupled to the illumination lens *via the beam splitter* such that the reference beam is reflected from the reference mirror to the beam splitter, the reference mirror eliminating the need for a reference objective on a reference arm,” as recited by amended Claim 8.

Again, as in other Office Actions, the Examiner nowhere alleges acknowledges that *Medford* discloses eliminating “the need for a reference objective on a reference arm.” Instead, the Examiner has argued with respect to Claims 1 and 8 (prior to their amendment herein) that “although *Medford* may not expressly state functional use of the elements ... a recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art to patentably distinguish the claimed invention from the prior art. As presently claimed, there is no structural difference.” Although Applicants’ disagree with the Examiner’s contention that Claims 1 and 8, prior to amendment herein, are not patentable over *Medford*, Applicants have amended each of Claims 1 and 8 to specifically recite a structural relationship among the claimed elements.

For at least the reasons set forth above, *Medford* fails to disclose the recited limitations and cannot render obvious Claims 1 and 8. Given that Claims 2-7 depend from Claim 1, and Claims 10-12, 33, and 34 depend from Claim 8, Applicants respectfully submit that Claims 2-7, 10-12, 33, and 34 are allowable. As such, Applicants respectfully request that the Examiner withdraw the rejections under 35 U.S.C. § 103(a) and allow Claims 1-8, 10-12, 33, and 34.

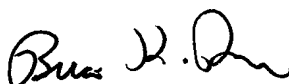
CONCLUSION

Applicants appreciate the Examiner's careful review of the application. Applicants have now made an earnest effort to place this case in condition for examination and allowance. For the foregoing reasons, Applicants respectfully request reconsideration of the application and allowance of the pending claims.

Applicant encloses a Petition for Extension of Time for three months and authorizes the Commissioner to charge the amount of \$1,110.00 to Deposit Account No. 50-2148 of Baker Botts L.L.P. Applicant believes no additional fees are due at this time; however the Commissioner is hereby authorized to charge any additional fees necessary or credit any overpayment to Deposit Account No. 50-2148 of Baker Botts L.L.P in order to effectuate this filing.

If there are any matters concerning this Application that may be cleared up in a telephone conversation, please contact Applicants' attorney at 512.322.2684.

Respectfully submitted,
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Date: Dec. 1, 2008

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